

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEVEN J. DIETL and MICHAEL CARLOTTA

Appeal No. 96-3340
Application 08/363,087¹

ON BRIEF

Before, HAIRSTON, CARMICHAEL and DIXON, **Administrative Patent Judges.**

DIXON, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 1, 10-13, 18 and 19 which are all of the claims pending in this application.

¹Application for patent filed December 23, 1994. According to appellants, this application is a continuation of application 07/885,704, filed May 19, 1992, now U.S. Patent No. 5,420,625, issued May 30, 1995.

BACKGROUND

The present invention relates to a system for supplying liquid ink to the print head of an ink-jet printing apparatus. The system consists of a housing for an ink-jet printer cartridge. Within the housing are three areas for ink storage. A first area comprises a majority of the volume of the housing and is filled with a porous material having a capillary force to hold the liquid ink. A second area in the housing includes a "scavenger" member which has a smaller volume than the first area, but has a higher capillary force than the first member. A third area is an open space having no porous material therein. The combination of the three areas provides the flow of liquid ink to the print head. The "scavenger" member feeds the ink to the print head and draws ink from the other two areas. As the ink is supplied to the print head and depleted from the housing a negative pressure is generated in the housing. The three areas are disclosed as having the liquid ink communicate therebetween to reduce the back pressure to an acceptable range for proper operation of the printer and to prevent leakage of the liquid ink.

Appellants have indicated that all claims stand or fall together. (Brief ² at page 5.)

Independent claim 1³ is representative of the invention and reproduced as follows:

² Appellants filed an appeal brief, January 22, 1996, (Paper No. 10). We will refer to this substitute appeal brief as simply the brief.

³ We have reviewed claim 1 (as amended) in light of the specification as originally filed and note that we do not find explicit support in the specification or the originally filed claims for the relationship of the open space to the size of the scavenger member or clear support of the functional relationship of the

1. A system for supplying liquid ink to an ink-jet printing apparatus, comprising:
 - a housing defining a chamber having a ventilation port and an outlet port;
 - a medium occupying a portion of the chamber, the medium having a capillary force associated therewith for retaining a quantity of liquid ink;
 - a scavenger member of a predetermined volume disposed across the outlet port, providing a capillary force greater than the capillary force of the medium; and
 - a free space defined within the housing adjacent a surface of the scavenger member, wherein ink is flowable between the scavenger member and the free space, the free space being of a volume not less than the volume of the scavenger member.

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Baker et al. (Baker)	4,771,295	Sep. 13, 1988
Kashimura et al. (Kashimura)	5,182,581	Jan. 26, 1993
	(effective filing date Jul. 26, 1989)	
Koitabashi et al. (Koitabashi)	5,216,450	Jun. 01, 1993
		(filed Oct. 24, 1990)

Claims 1, 10, 12, 13, 18 and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Baker in view of Kashimura.

Claim 11 stands rejected under 35 USC § 103 as being unpatentable over Baker in

open space as a ready supply of liquid ink for the scavenger member to reduce the back pressure. We make no findings as to the implicit disclosure from the original figures. We note that the material was introduced in a preliminary amendment filed with a Rule 60 continuation, a rejection was made by the Examiner and withdrawn after response thereto.

view of Kashimura as applied against claims 1 and 10 and further in view of Koitabashi. Appellants grouped all of the claims together as one group (see brief at page 5) and provided no separate argument. (See brief at page 8.)

Rather than reiterate the conflicting viewpoints advanced by the Examiner and the appellants, we make reference to the brief and answer⁴ for the details thereof.

OPINION

After a careful review of the evidence before us we disagree with the Examiner that claims 1, 10-13, 18 and 19 are properly rejected under 35 U.S.C. § 103 and we will not sustain the rejections of claims 1, 10-13, 18 and 19 .

As a consequence of our review, we make the determinations which follow.

Turning to the rejection of independent claim 1, we find that the Examiner has not met the burden of setting forth a *prima facie* case of obviousness in rejecting claim 1.

As pointed out by our reviewing court, we must first determine the scope of the claim.

"[T]he name of the game is the claim." *In re Hiniker Co.*, 150 F.3d 1362,1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). The claim sets forth a specific relationship between the size of scavenger member and the free space, "wherein ink is flowable

⁴ The Examiner responded to the brief with an Examiner's answer mailed April 16, 1996, (Paper No. 11). We will refer to this Examiner's answer as simply the answer.

between the scavenger member and the free space." Appellants argue that Baker does not, as asserted by the Examiner, teach the use of a scavenger member with a higher capillary force than the other ink storage medium. We agree with appellants. Baker merely teaches the use of a screen to filter particles and air bubbles. The Examiner has asserted in the alternative that Kashimura teaches the use of a scavenger member as claimed. (See answer at page 6.) We agree with the Examiner. On the other hand, appellants argue that Kashimura does not teach a free space having the claimed relationship to the size of the scavenger member. (See brief at page 6.) We agree with appellants. From a review of the specification and drawings of Kashimura, it is not clear that there is any available free space inside the housing except the nominal spaces surrounding the mediums. It would be mere speculation on our part to reach a conclusion as to the amount of available free space and whether it is in communication with the scavenger member so that ink would be "flowable between the scavenger member and the free space." Furthermore, Baker states that the "spacing

therebetween beneath the foam increases the compression of the foam in the areas above the three filters. This fact in turn increases the capillarity of the foam in the region thereof above these three filters and thus reduces the possibility of air bubbles." (See column 3, lines 40-44). Therefore, Baker is silent as to the flow of ink to or from the free space

ultimately to the print head or to a scavenger.

Appellants argue the interaction of the scavenger and the free space to draw ink therefrom into the scavenger, "draw ink quickly" and "draw a substantial quantity of free ink from an adjacent free space" (See brief at page 7.) We agree with the Examiner that these arguments go beyond the scope of the language and functionality set forth in claim 1. (See answer at page 7.) Moreover, the Examiner further states that the saw-tooth behavior, as argued by appellants, is not set forth in the language of claim 1 or its dependent claims. We agree with the Examiner. The Examiner states that the combination of Baker and Kashimura is properly combined. We agree with the Examiner that the references are properly combined, but the combination of teachings does not teach or suggest the invention as set forth in claim 1. In other words, the Examiner has not provided a convincing line of reasoning to modify these teachings to achieve the claimed relationship between the scavenger and the free space.

Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual

basis for the rejection. ***See In re Warner***, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), ***cert. denied***, 389 U.S. 1057 (1968). Our reviewing court has repeatedly cautioned against employing hindsight by using the appellants' disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. ***See, e.g., Grain Processing Corp. v. American Maize-Products Co.***, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988). Since all the limitations of independent claim 1 are neither taught nor suggested by the applied prior art, we cannot sustain the Examiner's rejection of appealed claim 1 under 35 U.S.C. § 103.

Since all the limitations of independent claim 1 are neither taught nor suggested by the applied prior art, we cannot sustain the Examiner's rejection of appealed claims 10-13, 18 and 19 which depend therefrom, under 35 U.S.C. § 103.

CONCLUSION

To summarize, the decision of the Examiner rejecting claims 1, 10-13, 18 and 19 under 35 U.S.C. § 103 is reversed. The decision of the Examiner is reversed.

REVERSED

Appeal No. 96-3340
Application 08/363,087

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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JAMES T. CARMICHAEL)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
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